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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,166	11/29/2000	Avner Pierre Badehi	41158	8559
1609	7590	12/31/2003	EXAMINER	
ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P.			THAI, LUAN C	
1300 19TH STREET, N.W.			ART UNIT	
SUITE 600			PAPER NUMBER	
WASHINGTON,, DC 20036			2827	

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

### Office Action Summary

Application No.

09/725,166

Applicant(s)

BADEHI, AVNER PIERRE

Examiner

Luan Thai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-14,16-19,30-32,35,37-40,55,60-69,73,74,76 and 81 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 60-69, 73-74, 76, and 81 is/are allowed.
- 6) ☒ Claim(s) 1-4,6-14,16-19,30-32,35,37-40 and 55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action is responsive to the Amendment filed on October 16, 2003.

Claims 1-4, 6-14, 16-19, 30-32, 35, 37-40, 55, 60-69, 73-74, 76, and 81 are pending in this application.

Claims 5, 15, 20-29, 33-34, 36, 41-54, 56-59, 70-72, 75, and 77-80, have been canceled.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-13, 16-19, 31-32, 37-40, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malinovich et al. (6,169,319) in view of Spaeth et al. (5,981,945 of record).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 10-13, 16-19, 37-40, and 55, Malinovich et al. disclose(s) specifically see figures 4A-4I) a chip scale packaged silicon substrate based device comprising: a silicon substrate (300) having formed thereon an optoelectronic structure (100), a chip scale package comprising at least one

transparent packaging layer made of glass (410/440) sealed over the optoelectronic structure by an adhesive (e.g., epoxy) layer (420/430) and defining therewith at least one gap between the silicon substrate (300) and the at least one transparent chip scale package layer (410/440), wherein the optoelectronic structure (100) receives light via the transparent chip scale packaging layer (440), wherein the chip scale package has a multiplicity of electrical contacts (460) plated along edge surface thereof.

Malinovich et al. do not explicitly teach that the silicon substrate is a crystalline substrate. However, silicon is commonly comprised monocrystalline, as disclosed by Spaeth et al. (Col. 3, lines 23+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the silicon crystalline substrate, as taught by Spaeth et al., to Malinovich et al. package, since such silicon crystalline substrate is commonly used in semiconductor art.

Regarding claims 31-32, applicant's claimed structures in claims 31-32 do not distinguish over the proposed device of Malinovich et al. and Spaeth et al. and it has been held that a recitation (e.g., microstructure comprises a surface acoustic wave device) with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

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3. Claims 14, 30, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malinovich et al. (6,169,319) and Spaeth et al. (5,981,945 of record), as applied to claim 10, and further in view of Eda et al. (5,925,973 of record).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 14, 30, and 35, the proposed device of Malinovich et al. and Spaeth et al. discloses all the limitations of the claimed invention as detailed above except for specifying the crystalline substrate comprising lithium niobate (as recited in claim 14), lithium tantalate (as recited in claim 30), or quartz (as recited in claim 35). However, lithium niobate, lithium tantalate and quartz are conventional materials in the art for making a crystalline substrate as being taught by Eda et al. (Col. 2, lines 35+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the crystalline substrate comprising either lithium niobate (as recited in claim 14), lithium tantalate (as recited in claim 30), or quartz (as recited in claim 35), since such materials are well known in the art for making a crystalline substrate as being taught by Eda et al.

***Allowable Subject Matter***

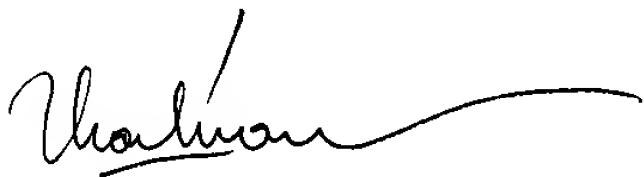
4. Claims 60-69, 73-74, 76, and 81, are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter:

The prior art taken either singly or in combination fails to anticipate or fairly suggest: a spacer on the substrate to define at least one cavity extending entirely therethrough, as recited in independent claims 60 and 65; especially when these limitations are considered within the specific combination claimed.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan Thai whose telephone number is (703) 308-1211 (after 2/05/2004 the phone number would be changed to 571-272-1935). The examiner can normally be reached on 7:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (703) 308-1233 (after 1/12/2004 the phone number would be changed to 571-272-1957). The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0658.

A handwritten signature in black ink, appearing to read 'Luan Thai', with a long, sweeping horizontal line extending to the right.

Luan Thai  
December 22, 2003